

107TH CONGRESS  
2D SESSION

# S. 2448

To improve nationwide access to broadband services.

---

## IN THE SENATE OF THE UNITED STATES

MAY 2, 2002

Mr. HOLLINGS (for himself, Mrs. CLINTON, Mr. STEVENS, Mr. INOUE, Mr. ROCKEFELLER, and Mr. DORGAN) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

---

## A BILL

To improve nationwide access to broadband services.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

### 3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “Broadband Telecommunications Deployment Act of  
6 2002”.

7 (b) TABLE OF CONTENTS.—

8 The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. Findings.

### TITLE I—TRUST FUND FOR BROADBAND LOANS AND GRANTS

Sec. 101. Broadband deployment trust fund.

TITLE II—ACCESS TO BROADBAND TELECOMMUNICATIONS  
SERVICES IN RURAL AREAS

- Sec. 201. Loan program.
- Sec. 202. Grants for planning and feasibility studies on broadband deployment.
- Sec. 203. Pilot program for wireless or satellite broadband trials in rural areas.
- Sec. 204. Rural and underserved community broadband technology initiative.
- Sec. 205. Report on universal service and competition.
- Sec. 206. Block grants to States for broadband deployment.
- Sec. 207. GAO to study broadband deployment in other countries.
- Sec. 208. Assessment of homeland security and public safety needs in rural and underserved areas.

TITLE III—RESEARCH ON TECHNICAL AND FINANCIAL  
REQUIREMENTS FOR FASTER BROADBAND SERVICES

- Sec. 301. Research enhancement of broadband telecommunications services.
- Sec. 302. Grants to colleges and universities to research faster broadband technology.

TITLE IV—STIMULATING DEMAND FOR BROADBAND SERVICES

- Sec. 401. Grants to colleges and universities for research.
- Sec. 402. Grants to libraries to digitize collections.
- Sec. 403. Grants to museums to digitize collections.
- Sec. 404. Grants for DTV conversion and programming.

TITLE V—DIGITAL NETWORK TECHNOLOGY PROGRAM

- Sec. 501. Amendment of National Telecommunications and Information Administration Organization Act.
- Sec. 502. Definitions.
- Sec. 503. Funding.

**1 SEC. 2. FINDINGS.**

**2**       The Congress finds the following:

**3**               (1) Broadband service could revolutionize the  
**4**       way Americans live. Therefore, it is important that  
**5**       Congress examine the issues surrounding the avail-  
**6**       ability and subscription to broadband service.

**7**               (2) The Federal Communications Commission  
**8**       recently concluded that advanced telecommuni-  
**9**       cations capability is being deployed in a reasonable  
**10**      and timely manner and that although investment  
**11**      trends in general have slowed recently, investment in

1 infrastructure for advanced telecommunications re-  
2 mains strong.

3 (3) Approximately 85 percent of Americans  
4 have access to broadband service provided by either  
5 the cable or telephone companies.

6 (4) Some communities, such as those in rural  
7 and urban areas do not have access to broadband  
8 service.

9 (5) According to numerous reports only 10 to  
10 12 percent of consumers actually subscribe to  
11 broadband service, leading many to believe that the  
12 low adoption of broadband by consumers is not due  
13 to low availability, but instead to a lack of demand  
14 by consumers. In the top one-tenth of zip codes  
15 ranked by median family income, high-speed sub-  
16 scribers were reported in 96 percent of the zip codes.  
17 By contrast, high speed subscribers were reported in  
18 59 percent of zip codes with the lowest median fam-  
19 ily income.

20 (6) Cable and telephone companies provide  
21 broadband service with speeds of up to 1.5 megabits  
22 per second to residential consumers. However, many  
23 in the technology industry state that higher speeds  
24 are needed to provide telemedicine, video confer-

1       encing, movie and music over the internet and other  
2       internet applications.

3               (7) The Federal Communications Commission's  
4       policies for promoting broadband deployment must  
5       not undermine competition or universal service.

6               (8) Congress must explore ways to ensure that  
7       broadband service is available to all Americans and  
8       that no one is left behind. This includes exploring  
9       ways to increase deployment in unserved and under-  
10      served areas, address consumer demand factors, fa-  
11      cilitate innovation that results in higher service  
12      speeds, and promote consumer confidence when  
13      using the Internet.

14   **TITLE    I—TRUST    FUND    FOR**  
15       **BROADBAND    LOANS    AND**  
16       **GRANTS**

17   **SEC. 101. BROADBAND DEPLOYMENT TRUST FUND.**

18       (a) IN GENERAL.—The National Telecommuni-  
19      cations and Information Administration Organization Act  
20      is amended—

21               (1) by redesignating part C as part D; and

22               (2) by inserting after part B (47 U.S.C. 921 et  
23      seq.) the following new part:

1 **“PART C—ASSISTANCE TO PROMOTE BROADBAND DEPLOY-**  
 2 **MENT AND DEMAND.**

3 **“SEC. 131. BROADBAND DEPLOYMENT AND DEMAND TRUST**  
 4 **FUND.**

5 “(a) CREATION OF TRUST FUND.—There is estab-  
 6 lished in the Treasury of the United States a trust fund  
 7 to be known as the Broadband Deployment and Demand  
 8 Trust Fund.

9 “(b) EXPENDITURES FROM TRUST FUND.—  
 10 Amounts in the Trust Fund shall be available for making  
 11 expenditures to carry out the provisions of the Broadband  
 12 Telecommunications Deployment Act of 2002, and for  
 13 such expenditures as may be necessary to administer the  
 14 programs established therein.

15 “(c) TREATMENT AS TRUST FUND.—Subchapter B  
 16 of chapter 98 of the Internal Revenue Code of 1986 shall  
 17 apply to the administration of the Trust Fund.

18 **“SEC. 132. REGULATIONS.**

19 “The Secretary of Commerce may prescribe such reg-  
 20 ulations as may be necessary to carry out this part.

21 **“SEC. 133. AUTHORIZATION OF APPROPRIATIONS.**

22 “(a) AUTHORIZATION.—For each of fiscal years 2003  
 23 through 2007 there are authorized to be appropriated to  
 24 the Broadband Deployment and Demand Trust Fund an  
 25 amount equivalent to 50 percent of the taxes received in  
 26 the Treasury after September 30, 2002, and before Octo-

ber 1, 2007, under section 4251 (relating to tax on communications) of the Internal Revenue Code of 1986.

“(b) SUNSET OF APPROPRIATIONS STREAM.—The authorization of appropriations by subsection (a) Trust Fund shall terminate at the end of fiscal year 2007, but any balances remaining in the Trust Fund at the close of that fiscal year, and any repayments of loans made from the Trust Fund received after fiscal year 2007, shall remain available for obligation and expenditure from the Trust Fund.”.

## **TITLE II—ACCESS TO BROADBAND TELECOMMUNICATIONS SERVICES IN RURAL AREAS**

### **SEC. 201. LOAN PROGRAM.**

(a) PURPOSE.—The purpose of this section is to provide loans to fund the costs of the construction, improvement, and acquisition of facilities and equipment for broadband service in eligible rural and underserved communities.

(b) DEFINITIONS.—In this section:

(1) BROADBAND SERVICE.—The term “broadband service” means any technology identified by the National Telecommunications and Information Administration, in consultation with the Rural

1 Utilities Service of the Department of Agriculture,  
2 as having the capacity to transmit data to enable a  
3 subscriber to the service to originate and receive  
4 high-quality voice, high-speed data, graphics, or  
5 video.

6 (2) ELIGIBLE RURAL COMMUNITY.—The term  
7 “eligible rural community” means any incorporated  
8 or unincorporated place that—

9 (A) has not more than 50,000 inhabitants,  
10 based on the most recent available population  
11 statistics of the Bureau of the Census; and

12 (B) is not located in an area designated as  
13 a standard metropolitan statistical area.

14 (3) ELIGIBLE UNDERSERVED COMMUNITY.—  
15 The term “eligible underserved community” means  
16 any census tract located in—

17 (A) an empowerment zone or enterprise  
18 community designated under section 1391 of  
19 the Internal Revenue Code of 1986;

20 (B) the District of Columbia Enterprise  
21 Zone established under section 1400 of such  
22 Code;

23 (C) a renewal community designated under  
24 section 1400E of such Code; or

1 (D) a low-income community designated  
2 under section 45D of such Code.

3 (c) LOANS.—

4 (1) IN GENERAL.—The Rural Utilities Service,  
5 in consultation with National Telecommunications  
6 and Information Administration, shall make loans to  
7 eligible entities to provide funds for the construction,  
8 improvement, or acquisition of facilities and equip-  
9 ment for the provision of broadband service in eligi-  
10 ble rural and underserved communities.

11 (2) LOANS TO LECS.—The Rural Utilities Serv-  
12 ice, in consultation with National Telecommuni-  
13 cations and Information Administration, shall make  
14 loans to local exchange carriers (as defined in sec-  
15 tion 3(26) of the Communications Act of 1934 (47  
16 U.S.C. 151(26)) that are eligible entities to provide  
17 funds to upgrade or install remote terminals located  
18 more than 25,000 feet from the closest central office  
19 of the local exchange carrier, and for the installation  
20 of fiber optic cable or broadband wireless facilities  
21 between such remote terminals and the closest cen-  
22 tral office of a local exchange carrier, in order to  
23 provide broadband service to eligible rural and un-  
24 derserved communities.



1           (3) EFFECT OF COMMUNICATIONS POLICY.—

2       Notwithstanding any other provision of this section,  
 3       the Rural Utilities Service may not make a loan  
 4       under this subsection if the National Telecommuni-  
 5       cations and Information Administration determines  
 6       that the loan would have an adverse effect on com-  
 7       munications policy, including competition in the  
 8       communications marketplace.

9       (d) ELIGIBLE ENTITIES.—To be eligible to obtain a  
 10      loan under this section, an entity shall—

11           (1) be able to furnish, improve, or extend a  
 12      broadband service to an eligible rural or underserved  
 13      community; and

14           (2) submit to the Rural Utilities Service a pro-  
 15      posal for a project that meets the requirements of  
 16      this section.

17      (e) BROADBAND SERVICE.—The National Tele-  
 18      communications and Information Administration shall,  
 19      from time to time as advances in technology warrant, re-  
 20      view and recommend modifications to the rate-of-data  
 21      transmission criteria for purposes of the identification of  
 22      broadband service technologies under subsection (b)(1).

23      (f) TECHNOLOGICAL NEUTRALITY.—For purposes of  
 24      determining whether to make a loan for a project under  
 25      this section, the Rural Utilities Service shall apply techno-

1 logically neutral criteria and encourage the use of a variety  
 2 of landline and wireless technologies among applications.

3 (g) TERMS AND CONDITIONS FOR LOANS.—A loan  
 4 under subsection (d) shall—

5 (1) be made available in accordance with the re-  
 6 quirements of the Federal Credit Reform Act of  
 7 1990 (2 U.S.C. 661 et seq.);

8 (2) bear interest at an annual rate, as deter-  
 9 mined by the National Telecommunications and In-  
 10 formation Administration, in consultation with the  
 11 Rural Utilities Service, of—

12 (A) 4 percent per annum; or

13 (B) the current applicable market rate;

14 and

15 (3) have a term not to exceed the useful life of  
 16 the assets constructed, improved, or acquired with  
 17 the proceeds of the loan or extension of credit.

18 (h) USE OF LOAN PROCEEDS TO REFINANCE LOANS  
 19 FOR DEPLOYMENT OF BROADBAND SERVICE.—Notwith-  
 20 standing any other provision of this Act, the proceeds of  
 21 any loan made by the Rural Utilities Service under this  
 22 Act may be used by the recipient of the loan for the pur-  
 23 pose of refinancing an outstanding obligation of the recipi-  
 24 ent on another telecommunications loan made under this  
 25 Act if the use of the proceeds for that purpose will further

1 the construction, improvement, or acquisition of facilities  
2 and equipment for the provision of broadband service in  
3 eligible rural and underserved communities.

4 (i) INCUMBENT LOCAL EXCHANGE CARRIER MUST  
5 MAKE UPGRADED FACILITIES AVAILABLE.—In addition  
6 to any other requirement to provide unbundled network  
7 elements, any incumbent local exchange carrier (as defined  
8 in section 251(h) of the Communications Act of 1934 (47  
9 U.S.C. 251(h))) that uses funds made available under sub-  
10 section (c)(2) shall make remote terminals and fiber optic  
11 cable so funded, and any loop that includes such compo-  
12 nents, available to a requesting telecommunications carrier  
13 on an unbundled basis in accordance with the require-  
14 ments of sections 251 and 252 of the Communications Act  
15 of 1934 (47 U.S.C. 251, 252).

16 (j) FUNDING.—

17 (1) IN GENERAL.—The Secretary of Commerce  
18 shall make available from amounts in the Broadband  
19 Deployment and Demand Trust Fund not more than  
20 \$125,000,000 for each of fiscal years 2003 through  
21 2007 for loans under this section, of which  
22 \$25,000,000 shall be for loans under subsection  
23 (c)(2).

24 (2) VALUE OF LOANS OUTSTANDING.—The ag-  
25 gregate value of all loans made under this section

1 shall be at least \$2,500,000,000 for each such fiscal  
 2 year, including not more than \$500,000,000 for out-  
 3 standing loans under subsection (c)(2).

4 (3) ALLOCATION OF FUNDS.—

5 (A) IN GENERAL.—From amounts made  
 6 available for each fiscal year under paragraph  
 7 (1), the Rural Utilities Service shall establish a  
 8 national reserve for loans to eligible entities in  
 9 States under this section.

10 (B) UNOBLIGATED AMOUNTS.—Any  
 11 amounts in the reserve established for a State  
 12 for a fiscal year under subparagraph (A) that  
 13 are not obligated by April 1 of the fiscal year  
 14 shall be available to the Rural Utilities Service  
 15 to make loans under this section to eligible enti-  
 16 ties in any State, as determined by the Rural  
 17 Utilities Service.

18 **SEC. 202. GRANTS FOR PLANNING AND FEASIBILITY STUD-**  
 19 **IES ON BROADBAND DEPLOYMENT.**

20 (a) IN GENERAL.—The National Telecommuni-  
 21 cations and Information Administration shall make grants  
 22 to non-profit organizations for planning and feasibility  
 23 studies on the deployment of broadband services in dif-  
 24 ferent geographic areas, including towns, cities, counties,  
 25 and States.

1 (b) ELIGIBILITY CRITERIA.—

2 (1) IN GENERAL.—The National Telecommuni-  
3 cations and Information Administration may estab-  
4 lish additional criteria for eligibility for grants under  
5 this section, including criteria for the scope of the  
6 planning and feasibility studies to be carried out  
7 with grants under this section.

8 (2) CONTRIBUTION BY GRANTEE.—An organi-  
9 zation may not be awarded a grant under this sec-  
10 tion unless the entity agrees to contribute (out of  
11 funds other than the grant amount) to the planning  
12 and feasibility study to be funded by the grant an  
13 amount equal to the amount of the grant.

14 (c) APPLICATION.—An organization seeking a grant  
15 under this section shall submit an application for the  
16 grant to National Telecommunications and Information  
17 Administration that is in such form, and that contains  
18 such information, as the National Telecommunications  
19 and Information Administration shall require.

20 (d) LIMITATION ON USE OF GRANT AMOUNTS.—  
21 Grant amounts under this section may not be used for  
22 the acquisition of office equipment, the construction of  
23 buildings or other facilities, the acquisition or improve-  
24 ment of existing buildings or facilities, or the leasing of  
25 office space.

1 (e) RESERVATION OF FUNDS FOR GRANTS.—

2 (1) IN GENERAL.—The Secretary of Commerce  
3 shall make available from amounts in the Broadband  
4 Deployment and Demand Trust Fund not more than  
5 \$60,000,000 for each of fiscal years 2003 through  
6 2007 as a reserve for grants under this section.

7 (2) RELEASE.—Funds reserved under para-  
8 graph (1) for a fiscal year shall be reserved only  
9 until April 1 of the fiscal year.

10 (f) SUPPLEMENT NOT SUPPLANT.—

11 (1) IN GENERAL.—Eligibility for a grant under  
12 this section shall not affect eligibility for a grant or  
13 loan under another section of this Act.

14 (2) CONSIDERATIONS.—The National Tele-  
15 communications and Information Administration  
16 may not take into account the award of a grant  
17 under this section, or the award of a grant or loan  
18 under another section of this Act, in awarding a  
19 grant or loan under this section or another section  
20 of this Act, as the case may be.

21 (g) TERMINATION OF AUTHORITY.—

22 (1) IN GENERAL.—No grant may be made  
23 under this section after September 30, 2007.

24 (2) EFFECT ON VALIDITY OF GRANT.—Notwith-  
25 standing paragraph (1), any grant made under this

1 section before the date specified in paragraph (1)  
2 shall be valid.

3 **SEC. 203. PILOT PROGRAM FOR WIRELESS OR SATELLITE**  
4 **BROADBAND TRIALS IN RURAL AREAS.**

5 (a) IN GENERAL.—The National Telecommuni-  
6 cations and Information Administration shall support up  
7 to 7 pilot programs in each of fiscal years 2003 through  
8 2007 for conducting innovative applications of wireless,  
9 satellite, and other non-wireline technologies capable of de-  
10 livering broadband service (as defined in section  
11 201(b)(1)) to an eligible rural community (as defined in  
12 section 201(b)(2)) or an eligible underserved community  
13 (as defined in section 201(b)(3)). The National Tele-  
14 communications and Information Administration shall  
15 support 1 pilot program per year for fiber-to-the-home  
16 technology under this subsection except for any year for  
17 which no application is received for such a program.

18 (b) APPLICATION PROCEDURES AND CONDITIONS.—  
19 The National Telecommunications and Information Ad-  
20 ministration shall establish such application procedures  
21 and conditions for grants under this section as it deems  
22 appropriate.

23 (c) FUNDING.—The Secretary of Commerce shall  
24 make available from the Broadband Deployment and De-

1 mand Trust Fund up to \$2,000,000 per year for each pilot  
2 program under subsection (a).

3 **SEC. 204. RURAL AND UNDERSERVED COMMUNITY**  
4 **BROADBAND TECHNOLOGY INITIATIVE.**

5 The Director of the National Institute of Standards  
6 and Technology, through the Advanced Technology Pro-  
7 gram, may hold a portion of the Institute's competitions  
8 in thematic areas, selected after consultation with indus-  
9 try, academics, and other Federal Agencies, designed to  
10 develop and improve technical capabilities with respect to  
11 the speed, quality, and availability of technologies that will  
12 extend the reach of broadband Internet services to individ-  
13 uals living in eligible rural communities (as defined in sec-  
14 tion 201(b)(2)) and eligible underserved communities (as  
15 defined in section 201(b)(3)).

16 **SEC. 205. REPORT ON UNIVERSAL SERVICE AND COMPETI-**  
17 **TION.**

18 No later than May 1, 2003, a Federal-State Joint  
19 Board established pursuant to section 410(c) of the Com-  
20 munications Act of 1934 (47 U.S.C. 410(c)) and the Na-  
21 tional Exchange Carriers Association shall report to the  
22 Federal Communications Commission and to the Senate  
23 Committee on Commerce, Science, and Transportation  
24 and the House of Representatives Committee on Energy  
25 and Commerce on—



1           (1) the effect of reclassifying telecommuni-  
2       cations services provided by incumbent local ex-  
3       change carriers on—

4           (A) the level of support available for uni-  
5       versal service;

6           (B) the universal service contribution obli-  
7       gations of telecommunications carriers and  
8       other providers of telecommunications; and

9           (C) the ability of the Commission and  
10      State commissions to fulfill the requirements of  
11      subsections (b), (h), and (i) of section 254 of  
12      the Communications Act of 1934 (47 U.S.C.  
13      254);

14       (2) the effect on universal service of—

15       (A) reducing the availability of network  
16      elements provided by incumbent local exchange  
17      carriers;

18       (B) modifying the rates, terms, and condi-  
19      tions for the purchasing or leasing of such ele-  
20      ments; and

21       (C) reducing the oversight of the rates,  
22      charges, terms, and conditions for the pur-  
23      chasing or leasing of telecommunications serv-  
24      ices provided by such carriers; and

1           (3) the effect of such changes on competition in  
2           the provision of telecommunications services.

3   **SEC. 206. BLOCK GRANTS TO STATES FOR BROADBAND**  
4                           **DEPLOYMENT.**

5           (a) IN GENERAL.—The Secretary of Commerce shall  
6           establish a grant program to provide funding to State and  
7           local governments to encourage and support the deploy-  
8           ment of broadband technologies and services, particularly  
9           in eligible rural communities (as defined in section  
10          201(b)(2)) and eligible underserved communities (as de-  
11          fined in section 201(b)(3)).

12          (b) PURPOSES.—State and local governments receiv-  
13          ing grants under this section shall use the funds—

14                  (1) to spur investment in broadband facilities;

15                  (2) to stimulate deployment of broadband tech-  
16          nology and services;

17                  (3) to encourage the adoption of broadband in  
18          eligible rural communities (as defined in section  
19          201(b)(2)) and eligible underserved communities (as  
20          defined in section 201(b)(3)); and

21                  (4) to provide e-government services through  
22          improved access to government services through  
23          broadband Internet connections.

24          (c) APPLICATIONS.—To be eligible to receive a grant  
25          under this section, a State or local government shall sub-

1 mit an application to the Secretary at such time, in such  
2 manner, and containing such information as the Secretary  
3 may require. The Secretary shall establish a procedure for  
4 accepting, processing, and evaluating applications and  
5 publish an announcement of the procedure, including a  
6 statement regarding the availability of funds, in the Fed-  
7 eral Register.

8 (d) FUNDING.—The Secretary shall make available  
9 from amounts in the Broadband Deployment and Demand  
10 Trust Fund \$1,000,000,000 for each of fiscal years 2003  
11 through 2007 for grants under this section, of which  
12 \$250,000,000 shall be made available for each such fiscal  
13 year for e-government enhancement activities described in  
14 subsection (b)(4) in all communities.

15 **SEC. 207. GAO TO STUDY BROADBAND DEPLOYMENT IN**  
16 **OTHER COUNTRIES.**

17 The Comptroller General shall survey countries with  
18 broadband deployment and subscriber rates that are simi-  
19 lar to, or greater than, the broadband deployment and  
20 subscriber rates in the United States in order to determine  
21 the actions governments, carriers, and other parties have  
22 taken to facilitate the deployment of broadband (including  
23 the factors that encourage consumers to subscribe to  
24 broadband service) and report the results of his survey to  
25 the Congress by May 1, 2003.

1 **SEC. 208. ASSESSMENT OF HOMELAND SECURITY AND PUB-**  
 2 **LIC SAFETY NEEDS IN RURAL AND UNDER-**  
 3 **SERVED AREAS.**

4 (a) IN GENERAL.—No later than 6 months after the  
 5 date of enactment of this Act, the National Telecommuni-  
 6 cations and Information Administration shall issue a re-  
 7 port on the potential role of broadband in rural and under-  
 8 served areas in addressing homeland security and public  
 9 safety needs, and, as necessary, make recommendations  
 10 to enhance deployment to improve emergency response  
 11 systems.

12 (b) FUNDING.—The Secretary of Commerce shall  
 13 make available from the Broadband Deployment and De-  
 14 mand Trust Fund up to \$500,000 for the study under  
 15 subsection (a).

16 **TITLE III—RESEARCH ON TECH-**  
 17 **NICAL AND FINANCIAL RE-**  
 18 **QUIREMENTS FOR FASTER**  
 19 **BROADBAND SERVICES**

20 **SEC. 301. RESEARCH ENHANCEMENT OF BROADBAND**  
 21 **TELECOMMUNICATIONS SERVICES.**

22 (a) IN GENERAL.—

23 (1) NATIONAL SCIENCE BOARD RESEARCH.—

24 The Director of the National Science Board, without  
 25 considering any changes in telecommunications regu-  
 26 lation, shall research—

1 (A) technical changes that would be nec-  
2 essary with respect to wireline, wireless facili-  
3 ties, and satellite facilities to provide broadband  
4 telecommunications services in order to provide  
5 speeds between 50 megabits-per-second and 100  
6 megabits-per-second; and

7 (B) the financial cost of ensuring that all  
8 Americans have access to broadband services  
9 with speeds between 50 megabits-per-second  
10 and 100 megabits-per-second.

11 (2) ITS BROADBAND RESEARCH.—The Director  
12 of the Institute of Telecommunications Sciences of  
13 the National Telecommunications and Information  
14 Administration, in consultation with the Director of  
15 the National Institute of Science and Technology  
16 Laboratories, shall engage in research and  
17 development—

18 (A) of wireline, wireless facilities, and sat-  
19 ellite facilities to provide broadband tele-  
20 communications services in order to provide  
21 speeds between 50 megabits-per-second and 100  
22 megabits-per-second;

23 (B) of new broadband technologies to meet  
24 government and commercial needs; and

1 (C) with respect to the technical capabili-  
2 ties of existing technologies to improve their  
3 speed, quality, and availability and extend the  
4 reach of broadband services to individuals living  
5 in rural areas.

6 (3) SPECTRUM-SHARING AND INTERFERENCE  
7 ISSUES.—The Director of the Institute of Tele-  
8 communications Sciences shall also conduct research  
9 or studies—

10 (A) to enhance spectrum-sharing between  
11 governmental and private sector users of  
12 broadband services;

13 (B) to develop technologies that would en-  
14 able government and private sector users to use  
15 spectrum more efficiently; and

16 (C) to provide recommendations to the Ad-  
17 ministrator of the National Telecommunications  
18 and Information Administration that would  
19 enhance—

20 (i) government and private sector  
21 spectrum sharing opportunities and coordi-  
22 nation; and

23 (ii) private sector innovation of new  
24 wireless technologies that benefit govern-  
25 ment and private sector users.

1 (b) CONSULTATION AND COORDINATION.—The Di-  
2 rectors of the National Science Board, the Institute of  
3 Telecommunications Sciences, and the National Institute  
4 of Science and Technology Laboratories shall—

5 (1) consult with governmental and commercial  
6 users of broadband services as appropriate to facili-  
7 tate research under subsection (a); and

8 (2) consult with each other in order to coordi-  
9 nate their activities under subsection (a).

10 (c) RESULTS OF RESEARCH.—The Director shall  
11 make available to the public, in such manner as the Direc-  
12 tor considers appropriate, the results of any research car-  
13 ried out under this section.

14 (d) FUNDING.—The Secretary of Commerce shall  
15 make available from amounts in the Broadband Deploy-  
16 ment and Demand Trust Fund for each of fiscal years  
17 2003 through 2007 to carry out this section not more  
18 than—

19 (1) \$60,000,000 to the Director of the Institute  
20 of Telecommunications Sciences of the National  
21 Telecommunications and Information Administra-  
22 tion, of which not more than \$10,000,000 shall be  
23 used to carry out subsection (a)(2);

1           (2) \$15,000,000 to the Director of the National  
2       Institute of Science and Technology Laboratories;  
3       and

4           (3) \$50,000,000 to the Director of the National  
5       Science Board.

6   **SEC. 302. GRANTS TO COLLEGES AND UNIVERSITIES TO RE-**  
7                   **SEARCH FASTER BROADBAND TECHNOLOGY.**

8       (a) IN GENERAL.—The Director of the National  
9       Science Foundation shall establish and administer a grant  
10      program to fund research at colleges and universities into  
11      advancing the technical aspects of broadband technology  
12      in order to provide speeds between 50 megabits-per-second  
13      and 100 megabits-per-second. In carrying out this sub-  
14      section, the Director shall ensure that grants are geo-  
15      graphically distributed nationwide.

16      (b) FUNDING.—The Secretary of Commerce shall  
17      make available from amounts in the Broadband Deploy-  
18      ment and Demand Trust Fund not more than  
19      \$50,000,000 for each of fiscal years 2003 through 2007  
20      to the National Science Board for purposes of activities  
21      under this section.



1 **TITLE IV—STIMULATING DE-**  
2 **MAND FOR BROADBAND**  
3 **SERVICES**

4 **SEC. 401. GRANTS TO COLLEGES AND UNIVERSITIES FOR**  
5 **RESEARCH.**

6 (a) IN GENERAL.—The National Telecommuni-  
7 cations and Information Administration shall establish  
8 and administer a grant program to fund research at col-  
9 leges and universities to develop computer or Internet ap-  
10 plications that require broadband facilities and are of par-  
11 ticular use to residential consumers.

12 (b) FUNDING.—The Secretary of Commerce shall  
13 make available from amounts in the Broadband Deploy-  
14 ment and Demand Trust Fund not more than  
15 \$50,000,000 for each of fiscal years 2003 through 2007  
16 for grants under this section.

17 **SEC. 402. GRANTS TO LIBRARIES TO DIGITIZE COLLEC-**  
18 **TIONS.**

19 (a) IN GENERAL.—The National Telecommuni-  
20 cations and Information Administration shall establish  
21 and administer a grant program for libraries to enable  
22 them to make a record in digital format of their collec-  
23 tions.

24 (b) CONSULTATION WITH KNOWLEDGEABLE PER-  
25 SONS.—In making grants under subsection (a), the Na-

1 tional Telecommunications and Information Administra-  
2 tion shall consult with—

3 (1) the Librarian of Congress;

4 (2) the Archivist of the United States; and

5 (3) representatives of libraries, academic insti-  
6 tutions, and other individuals with professional re-  
7 sponsibilities related to collection, curation, preserva-  
8 tion, and display of books, records, films, and other  
9 written or recorded matter of public interest.

10 (c) FUNDING.—The Secretary of Commerce shall  
11 make available from amounts in the Broadband Deploy-  
12 ment and Demand Trust Fund not more than  
13 \$100,000,000 for each of fiscal years 2003 through 2007  
14 for grants under this section.

15 **SEC. 403. GRANTS TO MUSEUMS TO DIGITIZE COLLEC-**  
16 **TIONS.**

17 (a) IN GENERAL.—The National Telecommuni-  
18 cations and Information Administration shall establish  
19 and administer a grant program for museums to enable  
20 them to make a record in digital format of their collec-  
21 tions.

22 (b) CONSULTATION WITH KNOWLEDGEABLE PER-  
23 SONS.—In making grants under subsection (a), the Na-  
24 tional Telecommunications and Information Administra-  
25 tion shall consult with—

1           (1) the Secretary of the Smithsonian Institu-  
2       tion;

3           (2) the Chairman of the National Endowment  
4       for the Arts;

5           (3) the Chairman of the National Endowment  
6       for the Humanities; and

7           (4) representatives of museums, academic insti-  
8       tutions, and other individuals with professional re-  
9       sponsibilities related to collection, curation, preserva-  
10      tion, and display of objects of significant public in-  
11      terest.

12       (c) FUNDING.—The Secretary of Commerce shall  
13      make available from amounts in the Broadband Deploy-  
14      ment and Demand Trust Fund not more than  
15      \$100,000,000 for each of fiscal years 2003 through 2007  
16      for grants under this section.

17   **SEC. 404. GRANTS FOR DTV CONVERSION AND PROGRAM-**  
18                           **MING.**

19       The Secretary of Commerce shall make available  
20      from amounts in the Broadband Deployment and Demand  
21      Trust Fund not more than \$50,000,000 for each of fiscal  
22      years 2003 through 2007 to the National Telecommuni-  
23      cations and Information Administration for grants under  
24      the Public Telecommunications Facilities Program for fa-  
25      cility upgrades to transmit digital television programming

1 and to develop educational and public interest digital pro-  
 2 gramming.

3 **TITLE V—DIGITAL NETWORK**  
 4 **TECHNOLOGY PROGRAM**

5 **SEC. 501. AMENDMENT OF NATIONAL TELECOMMUNI-**  
 6 **CATIONS AND INFORMATION ADMINISTRA-**  
 7 **TION ORGANIZATION ACT.**

8 Title I of the National Telecommunications and In-  
 9 formation Administration Organization Act (47 U.S.C.  
 10 901 et seq.), as amended by section 101, is amended by  
 11 adding at the end the following:

12 “PART E—DIGITAL NETWORK TECHNOLOGY  
 13 PROGRAM

14 **“SEC. 171. PROGRAM AUTHORIZED.**

15 “The Secretary shall establish, within the NTIA’s  
 16 Technology Opportunities Program a digital network tech-  
 17 nologies program to strengthen the capacity of eligible in-  
 18 stitutions to provide instruction in digital network tech-  
 19 nologies by providing grants to, or executing contracts or  
 20 cooperative agreements with, those institutions to provide  
 21 such instruction.

22 **“SEC. 172. ACTIVITIES SUPPORTED.**

23 “An eligible institution shall use a grant, contract,  
 24 or cooperative agreement awarded under this part—

1           “(1) to acquire the equipment, instrumentation,  
2           networking capability, hardware and software, dig-  
3           ital network technology, and infrastructure necessary  
4           to teach students and teachers about technology in  
5           the classroom;

6           “(2) to develop and provide educational serv-  
7           ices, including faculty development, to prepare stu-  
8           dents or faculty seeking a degree or certificate that  
9           is approved by the State, or a regional accrediting  
10          body recognized by the Secretary of Education;

11          “(3) to provide teacher education, library and  
12          media specialist training, and preschool and teacher  
13          aid certification to individuals who seek to acquire or  
14          enhance technology skills in order to use technology  
15          in the classroom or instructional process;

16          “(4) to implement a joint project to provide  
17          education regarding technology in the classroom  
18          with a State or State education agency, local edu-  
19          cation agency, community-based organization, na-  
20          tional non-profit organization, or business, including  
21          minority business or a business located in HUB  
22          zones, as defined by the Small Business Administra-  
23          tion;

24          “(5) to provide leadership development to ad-  
25          ministrators, board members, and faculty of eligible

1 institutions with institutional responsibility for tech-  
2 nology education; or

3 “(6) to acquire equipment, instrumentation,  
4 networking capability, hardware and software, dig-  
5 ital network technology, and infrastructure necessary  
6 to meet community networking needs.

7 **“SEC. 173. APPLICATION AND REVIEW PROCEDURE.**

8 “(a) IN GENERAL.—To be eligible to receive a grant,  
9 contract, or cooperative agreement under this part, an eli-  
10 gible institution shall submit an application to the Sec-  
11 retary at such time, in such manner, and accompanied by  
12 such information as the Secretary may reasonably require.  
13 The Secretary, in consultation with the panel described  
14 in subsection (b), shall establish a procedure by which to  
15 accept such applications and publish an announcement of  
16 such procedure, including a statement regarding the avail-  
17 ability of funds, in the Federal Register.

18 “(b) PEER REVIEW PANEL.—The Secretary shall es-  
19 tablish a peer review panel to aid the Secretary in estab-  
20 lishing the application procedure described in subsection  
21 (a) and selecting applicants to receive grants, contracts,  
22 and cooperative agreements under section 171. In select-  
23 ing the members for such panel, the Secretary may consult  
24 with appropriate cabinet-level officials, representatives of  
25 non-Federal organizations, and representatives of eligible

1 institutions to ensure that the membership of such panel  
2 reflects membership of the minority higher education com-  
3 munity, including Federal agency personnel and other in-  
4 dividuals who are knowledgeable about issues regarding  
5 minority education institutions.

6 **“SEC. 174. MATCHING REQUIREMENT.**

7       “The Secretary may not award a grant, contract, or  
8 cooperative agreement to an eligible institution under this  
9 part unless such institution agrees that, with respect to  
10 the costs to be incurred by the institution in carrying out  
11 the program for which the grant, contract, or cooperative  
12 agreement was awarded, such institution will make avail-  
13 able (directly or through donations from public or private  
14 entities) non-Federal contributions in an amount equal to  
15  $\frac{1}{4}$  of the amount of the grant, contract, or cooperative  
16 agreement awarded by the Secretary, or \$500,000, which-  
17 ever is the lesser amount. The Secretary shall waive the  
18 matching requirement for any institution or consortium  
19 with no endowment, or an endowment that has a current  
20 dollar value lower than \$50,000,000.

21 **“SEC. 175. LIMITATION.**

22       “An eligible institution that receives a grant, con-  
23 tract, or cooperative agreement under this part that ex-  
24 ceeds \$2,500,000, shall not be eligible to receive another  
25 grant, contract, or cooperative agreement under this part

1 until every other eligible institution has received a grant,  
 2 contract, or cooperative agreement under this part.

3 **“SEC. 176. ANNUAL REPORT AND EVALUATION.**

4       “(a) ANNUAL REPORT REQUIRED FROM RECIPI-  
 5 ENTS.—Each institution that receives a grant, contract,  
 6 or cooperative agreement under this part shall provide an  
 7 annual report to the Secretary on its use of the grant,  
 8 contract, or cooperative agreement.

9       “(b) EVALUATION BY SECRETARY.—The Secretary,  
 10 in consultation with the Secretary of Education, shall—

11               “(1) review the reports provided under sub-  
 12 section (a) each year;

13               “(2) evaluate the program authorized by section  
 14 171 on the basis of those reports; and

15               “(3) conduct a final evaluation at the end of  
 16 the third year

17               “(c) CONTENTS OF EVALUATION.—The  
 18 Secretary, in the evaluation, shall describe the  
 19 activities undertaken by those institutions and  
 20 shall assess the short-range and long-range im-  
 21 pact of activities carried out under the grant,  
 22 contract, or cooperative agreement on the stu-  
 23 dents, faculty, and staff of the institutions.

24               “(d) REPORT TO CONGRESS.—The Sec-  
 25 retary shall submit a report to the Congress



1           based on the final evaluation within 1 year after  
 2           conducting the final evaluation. In the report,  
 3           the Secretary shall include such recommenda-  
 4           tions, including recommendations concerning  
 5           the continuing need for Federal support of the  
 6           program, as may be appropriate.

7           “PART F—COMMUNITY NETWORKING PROGRAM

8   **“SEC. 191. PROGRAM AUTHORIZED.**

9           “(a) IN GENERAL.—The Secretary shall establish,  
 10          within NTIA’s Technology Opportunities Program, a com-  
 11          munity networking program to enable underserved com-  
 12          munities to deploy broadband capable networks, aggregate  
 13          demand for broadband services, and provide broadband  
 14          access for economic development, public safety, health  
 15          care, and educational needs of the community.

16          “(b) CONFERENCES.—The Secretary shall conduct  
 17          conferences throughout each of the fiscal years 2003  
 18          through 2007 to inform State and local governments and  
 19          the public about best practices in community networking  
 20          and broadband applications for small businesses, telemedi-  
 21          cine, distance learning, teleagriculture, and other special-  
 22          ized uses of such applications.

23   **“SEC. 192. ACTIVITIES SUPPORTED.**

24          “An eligible entity shall use a grant under this part  
 25          to acquire the equipment, instrumentation, networking ca-

1 pability, hardware, software, broadband network tech-  
2 nology, and infrastructure necessary to provide access to  
3 broadband telecommunications and information services  
4 necessary to promote economic development and enhance  
5 the public safety, educational, and health care needs of  
6 the eligible community.

7 **“SEC. 193. APPLICATION PROCEDURE.**

8       “(a) IN GENERAL.—To be eligible to receive a grant  
9 under this part, an eligible entity shall submit an applica-  
10 tion to the Secretary at such time, in such manner, and  
11 accompanied by such information as the Secretary may  
12 reasonably require. The Secretary, in consultation with the  
13 panel described in subsection (b), shall establish a proce-  
14 dure by which to accept such applications and publish an  
15 announcement of such procedure, including a statement  
16 regarding the availability of funds, in the Federal Reg-  
17 ister.

18       “(b) PEER REVIEW PANEL.—The Secretary shall es-  
19 tablish a peer review panel to aid the Secretary in estab-  
20 lishing the application procedure described in subsection  
21 (a) and selecting applicants to receive grants, contracts,  
22 and cooperative agreements under section 191.

23 **“SEC. 194. MATCHING REQUIREMENT.**

24       “The Secretary may not award a grant to an eligible  
25 entity under this part unless the entity agrees to make

1 available, directly or in kind, non-Federal contributions to  
 2 the costs of the program equal to the amount of the  
 3 grant.”.

4 **SEC. 502. DEFINITIONS.**

5 Section 102(a) of the National Telecommunications  
 6 and Information Administration Organization Act (47  
 7 U.S.C. 901(a)) is amended by adding at the end the fol-  
 8 lowing:

9 “(6) ELIGIBLE INSTITUTION.—The term ‘eligi-  
 10 ble institution’ means an institution that is—

11 “(A) a historically Black college or univer-  
 12 sity that is a part B institution, as defined in  
 13 section 322(2) of the Higher Education Act of  
 14 1965 (20 U.S.C. 1061(2)), an institution de-  
 15 scribed in section 326(e)(1) (A), (B), or (C) of  
 16 that Act (20 U.S.C. 1063b(e)(1) (A), (B), or  
 17 (C)), or a consortium of institutions described  
 18 in this subparagraph;

19 “(B) a Hispanic-serving institution, as de-  
 20 fined in section 502(a)(5) of the Higher Edu-  
 21 cation Act of 1965 (20 U.S.C. 1101a(a)(5));

22 “(C) a tribally controlled college or univer-  
 23 sity, as defined in section 316(b)(3) of the  
 24 Higher Education Act of 1965 (20 U.S.C.  
 25 1059c(b)(3));

1           “(D) an Alaska Native-serving institution  
2           under section 317(b) of the Higher Education  
3           Act of 1965 (20 U.S.C. 1059d(b));

4           “(E) a Native Hawaiian-serving institution  
5           under section 317(b) of the Higher Education  
6           Act of 1965 (20 U.S.C. 1059d(b)); or

7           “(F) an institution determined by the Sec-  
8           retary, in consultation with the Secretary of  
9           Education, to have enrolled a substantial num-  
10          ber of minority, low-income students during the  
11          previous academic year who received assistance  
12          under subpart I of part A of title IV of the  
13          Higher Education Act of 1965 (20 U.S.C.  
14          1070a et seq.) for that year.

15          “(7) ELIGIBLE ENTITY.—The term ‘eligible en-  
16          tity’ means a State, local, or Tribal government or  
17          a nonprofit organization.

18          “(8) ELIGIBLE COMMUNITY.—The term ‘eligible  
19          community’ means a community that satisfactorily  
20          demonstrates to the Secretary that access to  
21          broadband services or broadband service applications  
22          are essential to the economic development, public  
23          safety, education, and health care needs of the com-  
24          munity and such access is not available at affordable  
25          rates or on reasonable terms.”.

1 **SEC. 503. FUNDING.**

2       The Secretary of Commerce shall make available,  
3 from amounts in the Broadband Deployment and Demand  
4 Trust Fund, for each of the fiscal years 2003 through  
5 2007—

6           (1) \$250,000,000 to entities described in sec-  
7 tion 102(a)(6) of the National Telecommunications  
8 and Information Administration Organization Act to  
9 carry out part E of title I of that Act; and

10          (2) \$250,000,000 to carry out part F of title I  
11 of that Act, of which \$25,000,000 shall be used to  
12 acquire equipment, instrumentation, networking ca-  
13 pability, hardware and software, and infrastructure  
14 necessary to improve homeland security and public  
15 safety needs in rural and underserved communities.

○